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(54) **Packaging for consumer goods**

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Emballage pour produits de consommation

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(73) Proprietor:
**EMI COMPACT DISC (Holland) B.V.
5400 AH Uden (NL)**

(72) Inventor:
**Lankhuijzen, Jan Pieter
NL-5632 LM Eindhoven (NL)**

(74) Representative: **Leaman, Keith
QED Patents Limited,
Dawley Road
Hayes, Middlesex UB3 1HH (GB)**

(56) References cited:
**FR-A- 2 581 971 US-A- 3 884 348
US-A- 4 113 100**

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Description

Field of the Invention

[0001] This present invention relates to boxes of cardboard or like material for transporting consumer goods, particularly though not exclusively packs of compact discs (CD's).

Background Art

[0002] It is a common requirement in the music industry to package packs of CD cassettes (commonly known as "jewel boxes"), say 25 CD's, the cassettes being positioned face to face, one behind the other. There are various types of packaging in common use, but they all have a shape conforming to the shape of the CD pack, namely a narrow rectangular box having a similar cross-section to that of the CD cassette and of a length sufficient to accommodate the CD pack. Such packaging is frequently designed to be opened in one specific orientation.

[0003] A problem has arisen in modern storage systems in warehouses and shops which include flow-racks, in which packages move under gravity on roller ways, where it is not possible to maintain the package in a specific orientation, for example because locations are allocated for the package which are smaller than the width dimension of the pack in its normal orientation. Thus after processing in the storage system, the package may be disposed in an orientation, for example on its side, in which it is not convenient or possible to open the package. This is a problem where speedy and efficient access to the CD's is required, particularly if it is required to remove only some of the CD's from the pack and to leave the remainder in place in the package in the storage system.

[0004] Packages in common use are as follows:

1. Shallow trays in which the CD pack is positioned, the whole being covered in shrink-wrapping. This can conveniently only be opened with the tray lowermost, and if the tray is disposed on its side, then it is not convenient to open the package and to remove only some of the CD's without risk of spilling the remainder.
2. A wrap-around box wherein a cardboard blank is folded around the CD pack. To access the pack, the box has to be opened at one end and the CD's removed individually. Otherwise the box has to be removed from its position and cut or torn open, which is clearly inconvenient.
3. A box with a lid. This implies the box should be stored on its base with the lid uppermost. If the box is disposed on its side, then access becomes difficult.
4. A simple shrink-wrapped covering around the pack. This is structurally not strong enough for con-

veyor belt systems and further cannot be opened without destruction of the package. Thus it is not possible to extract some CD's and to leave the rest in place.

[0005] A design of cardboard box, not specifically intended for CD's, which provides a display function, is shown in FR-A-2581971. The box is of the wrap-around type with tear strips which enable the whole of the top of the box, or just a front quadrant of the box, to be removed from the remainder so that the objects within the box can be displayed without removing them. Similarly, US-A-4,113,100 and US-A-3,884,348 disclose cardboard boxes having tear strips for separating the boxes into two halves so that the lower half can function as a display tray for the contents. None of these references is specifically designed for CD's, and all of these references require opening to take place in one specific orientation of the box.

Summary of the Invention

[0006] It is an object of the invention to provide a package for consumer goods which can easily be opened and its contents accessed, without requiring the package to be disposed in one specific orientation.

[0007] The present invention provides a box formed of cardboard or like material as claimed in claim 1.

[0008] In accordance with the invention, the box may be simply opened in the position in which it is stored without having to re-orientate the box. Thus if the box is disposed in its "correct" position with the base panel at the bottom, it is possible to open the box by means of the first tear-strip running through the side panels so that the entire upper half of the box can be removed to expose the CD pack, whereby a required number of CD cassettes may be removed, leaving the remainder in place.

[0009] If, however, the box is disposed on its side with a side panel lowermost, then the box may be opened by means of the tear-strip running through the base panel and end panels, whereby the top half of the box containing the top side panel may be removed, to expose the contents of the box.

[0010] In addition, the top flaps of the box may be opened so as to gain access to the box for adding promotional material, etc. It would normally be inconvenient to extract the CD's merely by opening the top flaps. The top flaps would normally be formed as one flap connected along a fold line to each side panel and extending approximately half way across the top of the box. In this way if the tear-strip extending through the base panel is positioned at the centre line of the base panel, then when the tear-strip is removed, the top flaps will not interfere with the removal of one half of the box. However, other configurations of top flap are in principle possible, for example, only one top flap extending from one side panel over the whole top region. In addition,

the top flap or flaps may have connected thereto, through fold lines or perforated lines, end extension panels which when the flaps are positioned over the top of the CD pack, may be folded down over the end panels and secured thereto, for example, by adhesive in order to maintain the top flaps in place. When it is desired to open the top flaps it is merely necessary to pull the top flaps upwards so that the top panels tear along the perforated lines, or alternatively, to release the end panels by breaking the adhesive bond.

[0011] As preferred, the end panels extending from the base and side panels are so dimensioned that the perforation lines running therethrough defining the first tear-strip does not overlap with any of the other base panels, since otherwise it would be necessary to have tear-strips through two or three layers of end panels. In a preferred arrangement, the end panels attached to the side panels extend only half way or less than half way across the ends of the box. In this way they adjoin or define a small gap at the centre line of the ends, and if the second tear-strip running through the base panel and associated end panels is positioned at the centre line of the base panel, then this tear-strip coincides with the gap between the end panels of the side panels, so that the end panels do not interfere with the operation of the tear strip.

[0012] In a further aspect, the present invention extends to a blank of cardboard or like material as claimed in claim 10.

Brief Description of the Drawings

[0013] A preferred embodiment will now be described by way of example with reference to the accompanying drawings wherein:-

Figure 1 is a plan view of a cardboard blank for forming the box according to the invention;

Figures 2 to 5 are perspective views of the box in the assembled condition holding a pack of CD's in various orientations; and

Figures 6 through 10 are top, front, side, back and bottom views, respectively, of the assembled box.

Description of the Preferred Embodiment

[0014] It will be understood that the drawings illustrate a box for holding a pack of 25 CD cassettes or jewel boxes. The cassettes are entirely conventional in construction, being flat rectangular boxes with one end having an access portion for the CD, resulting in a cassette with a length dimension of 141 mm and a width dimension of 124 mm.

[0015] Referring now to Figures 1 to 8, Figure 1 discloses a blank 2 of cardboard for forming a box comprising a first set of parallel fold lines 4a, 4b, 4c and 4d for defining a central base panel 6 of rectangular form and a width (142mm) slightly more than that of a CD cas-

sette, adjoining side panels 8a, 8b, of rectangular shape and having a width equal to the width dimension of a CD (124mm), and first and second top flaps 10a, 10b, adjoining respective side panels 8a and 8b. A second set of fold lines 12a and 12b running across the blank at right angles to the first fold line set, defines end panels 14a, 14b, 16a, 16b and 18a, 18b, extending respectively from first side panels 8a, base panel 6 and second side panel 8b. The end panels are further defined by inwardly extending V-shaped cut lines 20a, 20b, 22a, 22b, 24a, 24b, and 26a, 26b extending from the periphery of the blank to junctions between the first and second fold line sets. It will be noted that the width of the end panels 14, 18 adjoining the side panels 8 are of a width (72mm) that in the assembled box there is a gap between adjoining end panels (see below). The width of the end panel 16b extending from base panel 6 is substantially less than the width of the other base panels.

[0016] End extensions 30a, b, c, d, extend from perforation lines 32a, b, c, d, at the end edges of end flaps 10a, b, which lines of perforations are aligned with fold lines 12a, b. Recesses 33 having the form of quarter circles are disposed at the free ends of perforation lines 32a-d.

[0017] A first set of perforations comprising lines of perforations 34a, b, c, d, extend across side panels 8a, b, and associated end panels 14a, b, 18a, b, in order to define two halves 42 a,b of a first tear-strip 42 (see Figures 2 to 5); these perforations have the form of "sharks teeth" i.e., having a parallel portion and an inwardly extending portion. Tear-strip 42 extends across side panels 8 making a small angle over most of its length with the centre line of side panels 8, and extends across end panels 14, 18 and a small part of side panels 8a, b, in the region indicated at 44, in a direction parallel to centre line of panel 8. Tear strip halves 42a,b terminate at one end in arcuate protrusions 46 which in the assembled box form "apple-core" shaped finger recess 48 (Figs. 2,3).

[0018] A second set of perforations comprising parallel lines of perforations 50a, 50b extend across the centre line of base panel 6 and associated end flaps 16a, b, in order to define a second tear-strip 52. Tear-strip 52 terminates at one end in an arcuate recess 53 of a shape similar to that of recesses 48.

[0019] In addition, display apertures 55 are provided in side panels 8a,b on either side of tear-strip 42, in order to view information printed on the spines of cassettes within the box.

[0020] When the blank is assembled, the end panels 14, 16, 18 are fixed together by adhesive and the end flaps 30a - d are folded down and fixed or bonded to the end panels, in order to provide the box as shown in Figures 2 - 10.

[0021] Referring to Figure 9 particularly, that is the back view of the ends of the box, it may be seen that tear-strip halves 42a,b terminate in protrusion 46, in order to define an apple-core shaped aperture 48 for an

operator to insert a finger in order to begin tearing of the tear-strip. In addition, tear-strip 52 running around the base of the box terminates in a recess 53 adjacent the aperture 48 to provide a means of accessing the end of tear-strip 52. It may also be seen, particularly in Figures 7 and 9 that the end panels 14a, 18a adjoin one another at their free ends to define a gap 54 which is collinear with tear-strip 52. In addition, this gap 54 is coextensive with the gap between the flap extension panels 30b, d (Figure 7) and 30a, c (Figure 9).

[0022] Thus, referring particularly to Figures 2 to 5, in use of the box according to the invention, in a modern storage system, the box, when it is desired to access the contents of the box, may have the normal orientation shown in Figure 2 with the base panel lowermost or may have the orientation shown in Figure 3 i.e., on its side with one of the side panels lowermost. For the normal orientation shown in Figure 2 if it is desired to access the contents of the box, it is merely necessary, without moving the box, to tear open the box by means of tear-strip 42. In order to do this, the operator will insert a finger into aperture 48 at one end of the box to grip the end of the tear-strip and then to tear open the tear-strip which extends on each side panel of the box in two separate halves and terminates at the aperture 48 at the back of the box.

[0023] Having done this it is possible to remove an upper half 60 of the box, leaving the pack of CD cassettes or jewel boxes exposed in the lower part of the box 62. It may be seen that part 62 has the form of a display tray in that the front of the tray (end panel 16b) is relatively small in height whereas the back of the tray (end panel 16a) is relatively high.

[0024] If on the other hand the box has the orientation as shown in Figure 3, then in order to open the box without disturbing the orientation, it is necessary to access tear-strip 52 via apertures 53. Tear-strip 52 extends around the base of the box and hence the tearing out of the tear-strip 52 will release only one half of the box. However, since as described above, the end panels 14, 18 adjoin along a separation gap 54 collinear with tear-strip 52, and the separation line between top flaps 10 is also collinear with tear strip 52, then once tear-strip 52 has been removed, it is possible to then separate the box into two halves 64, 66. Thus, top half 66 may be removed to expose the pack of CD cassettes.

[0025] Finally, in the position shown in Figure 2, the box may be opened by pulling open the top flaps 10a, 10b at recess 33. The flap extensions 30a - d will then either separate from the flaps along perforated lines 32a - d or the adhesive bond with the end panels will be broken. Then it is possible to for example insert brochures of promotional material into the top of the box or to extract the same. After opening of the top flaps, the box can be resealed by for example sticking the flaps down with tape.

[0026] Whilst the preferred embodiment has been described with reference to the packaging of CD's, it will

be understood that then consumer goods may be packed in the box of the invention, for example music cassettes (MC's). Since these are one half the width of a CD, the MC's can be packed two side by side to form a double pack of MC's within the box. The box height dimension may remain the same as for CD's or may be adapted to fit more closely to the MC pack.

Claims

1. A box of cardboard or like material having a top, base, sides and ends which are fixed together to form said box, wherein the base and sides are formed as panels (6,8a,b) of said material, the ends are formed from end panels (14a - 18b) connected by fold lines (12a, b) to the base and side panels, and the top is connected by one or more fold lines (4a,b) to the side panels, wherein the end panels and side panels are formed with a first pair of lines of perforations (34a - d) which define the edges of a first tear strip (42), which tear strip extends around the periphery of the box between the top and base, and which is adapted to allow the box to separate into two parts (60,62) when the said first tear strip is removed, wherein the end panels and the base panel are formed with a second pair of lines of perforations (50a, b) which define a second tear strip (52) which is adapted to allow the box to separate into two further parts (64,66), with one side panel in each further part, when the said second tear strip is removed, and wherein the top comprises one or more flaps (10a, 10b) being arranged to adjoin or define a gap for allowing the said box to separate into the said two further parts when the said second tear strip is removed.
2. A box according to claim 1 wherein the top comprises first and second top flaps (10a, b) each extending approximately halfway across the top to define a narrow gap (54).
3. A box according to claim 1 or 2 wherein the top flap or flaps has end extensions (30a - d) connected thereto across perforation lines (32a - d) for fixing to the end panels.
4. A box according to any preceding claim wherein the first tear strip is disposed so as not to overlap with the end panels (16a, b) of the base panel (6).
5. A box according to claim 4 wherein one base end panel (16b) is relatively narrow and the other base end panel (16a) is relatively wide so as to provide a display tray when the first tear strip is operated to divide the box into two parts.
6. A box according to any preceding claim, wherein the first tear side panel end panels are dimensioned

so that their adjoining edges define a narrow gap (54).

7. A box according to claim 6 wherein the first tear strip is divided into two halves (42a,b) by said gap, and protrusions (46) are provided in the tear strip to define an aperture (48) at said gap for finger access to the ends of the tear-strip. 5
8. A box according to claim 6 or 7 wherein the second tear strip (52) is collinear with the narrow gap (54). 10
9. A box according to claim 7 and 8 wherein the second tear strip terminates adjacent said aperture (48). 15
10. A blank (2) of cardboard or like material, for forming a box according to claim 1 when assembled and fixed together, comprising, a first set of parallel fold lines (4a - d) extending across the blank for defining a base panel (6), first and second side panels (8a, b) adjoining the base panel, and one or more top flaps (10a, b) attached to the side panels, a second set of parallel fold lines (12a, b) at right angles to the first set of fold lines defining end panels (14a - 18b) connected to the base panel and first and second side panels, a first pair of lines of perforations (34a - d) extending through the first and second side panels and associated end panels which define a first tear-strip (42) when assembled as a box, and a second pair of lines of perforations (50a, b) extending through the base panel and associated end panels which define a second tear-strip (52). 20 25 30

Patentansprüche

1. Karton aus Pappe oder ähnlichem Material mit einer Oberseite, einer Unterseite, Seiten und Enden, welche miteinander zur Bildung des Kartons verbunden sind, wobei die Unterseite und die Seiten als Platten (6, 8a,b) des genannten Materials ausgebildet sind, die Enden aus über Faltlinien (12a,b) mit der Unterseite und den Seitenplatten verbundenen Endplatten (14a - 18b) gebildet sind und die Oberseite über eine oder mehrere Faltlinien (4a,b) mit den Seitenplatten verbunden ist, wobei die Endplatten und Seitenplatten mit einem ersten Paar Perforationslinien (34a - d) ausgebildet sind, die die Kanten eines ersten Ausreißstreifens (42) definieren, welcher zwischen der Oberseite und der Unterseite um den Umfang des Kartons herumläuft und so ausgebildet ist, daß der Karton in zwei Teile (60, 62) geteilt werden kann, wenn der erste Ausreißstreifen entfernt wird, wobei die Endplatten und die Unterseitenplatte mit einem zweiten Paar Perforationslinien (50a - d) ausgebildet sind, die einen zweiten Ausreißstreifen (52) definieren, welcher so 40 45 50 55

ausgebildet ist, der Karton in zwei weitere Teile (64, 66) geteilt werden kann, und zwar mit einem Seitenteil in Jedem der weiteren Teile, wenn der zweite Ausreißstreifen entfernt wird, und wobei die Oberseite eine oder mehrere Klappen (10a, 10b) umfaßt, die so angeordnet sind, daß sie aneinander grenzen oder eine Spalt definieren, damit der Karton in die beiden weiteren Teile geteilt werden kann, wenn der zweite Ausreißstreifen entfernt wird.

2. Karton nach Anspruch 1, wobei die Oberseite eine erste und eine zweite Oberklappe (10a, b) umfaßt, welche sich beide ungefähr über die Hälfte der Oberseite erstrecken und einen schmalen Spalt (54) definieren.
3. Karton nach Anspruch 1 oder 2, wobei die Oberklappe oder Oberklappen zum Fixieren an den Endplatten Verlängerungen an den Enden (30a - d) aufweisen, die mit der Klappe bzw. den Klappen über Perforationslinien (32a - d) verbunden sind.
4. Karton nach einem der vorstehenden Ansprüche, wobei der erste Ausreißstreifen so angeordnet ist, daß er nicht mit den Endplatten (16a, b) der Unterseitenplatte (6) überlappt.
5. Karton nach Anspruch 4, wobei eine Unterseiten-Endplatte (16b) relativ schmal und die andere Unterseiten-Endplatte (16a) relativ breit ist, so daß ein Auslagentablett gebildet wird, wenn der erste Ausreißstreifen betätigt wird, um den Karton in zwei Teile zu zerteilen.
6. Karton nach einem der vorstehenden Ansprüche, wobei die Endplatten der ersten Ausreißseitenplatte so dimensioniert sind, daß ihre aneinanderstoßenden Kanten einen schmalen Spalt (54) definieren.
7. Karton nach Anspruch 6, wobei der erste Ausreißstreifen durch den Spalt in zwei Hälften (42a, b) unterteilt ist und in dem Ausreißstreifen Vorsprünge (46) vorgesehen sind, um zum zugriff für einen Finger auf die Enden des Ausreißstreifens eine Öffnung (48) an dem Spalt zu definieren.
8. Karton nach Anspruch 6 oder 7, wobei der zweite Ausreißstreifen (52) kollinear mit dem schmalen Spalt (54) ist.
9. Karton nach Anspruch 7 und 8, wobei der zweite Ausreißstreifen neben der Öffnung (48) abschließt.
10. Ein Rohling (2) aus Pappe oder ähnlichem Material zum Formen eines Kartons, im zusammengefügt und fixierten Zustand, nach Anspruch 1, enthal-

tend: une erste Gruppe paralleler, sich über den Rohling erstreckender Faltlinien (4a - d) zum Definieren einer Unterseitenplatte (6), an die Unterseitenplatte anschließender erster und zweiter Seitenplatten (8a, b) sowie an den Seitenplatten befestigter einer oder mehrerer Oberklappe(n) (10a, b), eine rechtwinklig zu der erste Gruppe von Faltlinien laufende zweite Gruppe paralleler Faltlinien (12a, b), welche mit der Unterseitenplatte und den ersten und zweiten Seitenplatten verbundene Endplatten (14a - 18b) definieren, ein über die ersten und zweiten Seitenplatten und die dazugehörigen Endplatten hinweglaufendes erstes Paar Perforationslinien (34a - d), welche im als Karton zusammengesetzten Zustand einen ersten Ausreißstreifen (42) definieren, und ein über die Unterseitenplatte und die dazugehörigen Endplatten hinweglaufendes zweites Paar Perforationslinien (50a, b), welche einen zweiten Ausreißstreifen (52) definieren.

Revendications

1. Boîte en carton ou en un matériau similaire possédant une partie supérieure, une base, des côtés et des extrémités, qui sont fixés entre eux pour former ladite boîte, dans laquelle la base et les côtés sont formés de panneaux (6,8a,b) dudit matériau, les extrémités sont formées de panneaux d'extrémité (14a-18b) raccordés par des lignes de pliage (12a,b) au panneau de base et aux panneaux latéraux, et la partie supérieure est raccordée par une ou plusieurs lignes de pliage (4a,b) aux panneaux latéraux, et dans laquelle les panneaux d'extrémité et les panneaux latéraux comportent un premier couple de lignes de perforations (34a-d), qui définissent les bords d'une première bande d'arrachement (42), laquelle bande d'arrachement s'étend autour de la périphérie de la boîte entre la Partie supérieure et la base et est adaptée de manière à permettre une subdivision de la boîte en deux parties (60, 62) lorsque ladite première bande d'arrachement est retirée, et dans laquelle les panneaux d'extrémité et le panneau de base comportent un second couple de lignes de perforations (50a,b) qui définissent une seconde bande d'arrachement (52), qui est adaptée pour permettre une subdivision de la boîte en deux autres parties (64, 66), un panneau latéral étant prévu dans chaque autre partie, lorsque ladite seconde bande d'arrachement est retirée, et dans laquelle la partie supérieure comprend un ou plusieurs rabats (10a, 10b) disposés de manière à se rejoindre ou à définir un interstice permettant de séparer ladite boîte en lesdites deux autres parties lorsque ladite seconde bande d'arrachement est retirée.

2. Boîte selon la revendication 1, dans laquelle la par-

tie supérieure comprend des premier et second rabats supérieurs (10a,b) dont chacun s'étend approximativement à mi-chemin en travers de la partie supérieure pour définir un interstice étroit (54).

3. Boîte selon la revendication 1 ou 2, dans laquelle le ou les rabats de la partie supérieure possèdent des prolongements d'extrémité (30a-d) qui y sont raccordés par l'intermédiaire de lignes de perforations (32a-d) pour la fixation aux panneaux d'extrémité

4. Boîte selon l'une des revendications précédentes, dans laquelle la première bande d'arrachement est disposée de manière à ne pas être en chevauchement avec les panneaux d'extrémité (16a,b) du panneau de base (6).

5. Boîte selon la revendication 4, dans laquelle un panneau d'extrémité de base (16b) est relativement étroit et l'autre panneau d'extrémité de base (16a) est relativement large de manière à former un plateau d'affichage lorsque la première bande d'arrachement est activée de manière à subdiviser la boîte en deux parties.

6. Boîte selon l'une quelconque des revendications précédentes, dans laquelle les panneaux d'extrémité sont dimensionnés de sorte que leurs bords, qui se rejoignent, définissent un interstice étroit (54).

7. Boîte selon la revendication 6, dans laquelle la première bande d'arrachement est subdivisée en deux moitiés (42a,b) par ledit interstice, et des parties saillantes (46) sont prévues dans la bande d'arrachement pour définir une ouverture (48) au niveau dudit interstice pour permettre au doigt d'accéder aux extrémités de la bande d'arrachement.

8. Boîte selon la revendication 6 ou 7, dans laquelle la seconde bande d'arrachement (52) est colinéaire à l'interstice étroit (54).

9. Boîte selon les revendications 7 et 8, dans laquelle la seconde bande d'arrachement se termine au voisinage de ladite ouverture (48).

10. Flan (2) en carton ou en un matériau similaire pour former une boîte selon la revendication 1, lorsqu'il est assemblé et fixé à lui-même, comprenant un premier ensemble de lignes parallèles de pliage (4a-d) qui s'étendent en travers du flan pour définir un panneau de base (6), des premier et second panneaux latéraux (8a,b) adjacents au panneau de base, et un ou plusieurs rabats supérieurs (10a,b) fixés aux panneaux latéraux, un second ensemble de lignes parallèles de pliage (12a, 12b) perpendi-

culaires au premier ensemble de lignes de plage définissant des panneaux d'extrémité (14a-18b) raccordés au panneau de base et aux premier et second panneaux latéraux, un premier couple de lignes de perforations (34a-d) s'étendant à travers lesdits premier et second panneaux latéraux et aux panneaux d'extrémité associés, qui définissent une première bande d'arrachement (42), lorsque les panneaux sont assemblés sous la forme d'une boîte, et un second couple de lignes de perforations (50a,b) s'étendant en travers du panneau de base et de panneaux d'extrémité associés, qui définissent une seconde bande d'arrachement (52).

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Fig.1.

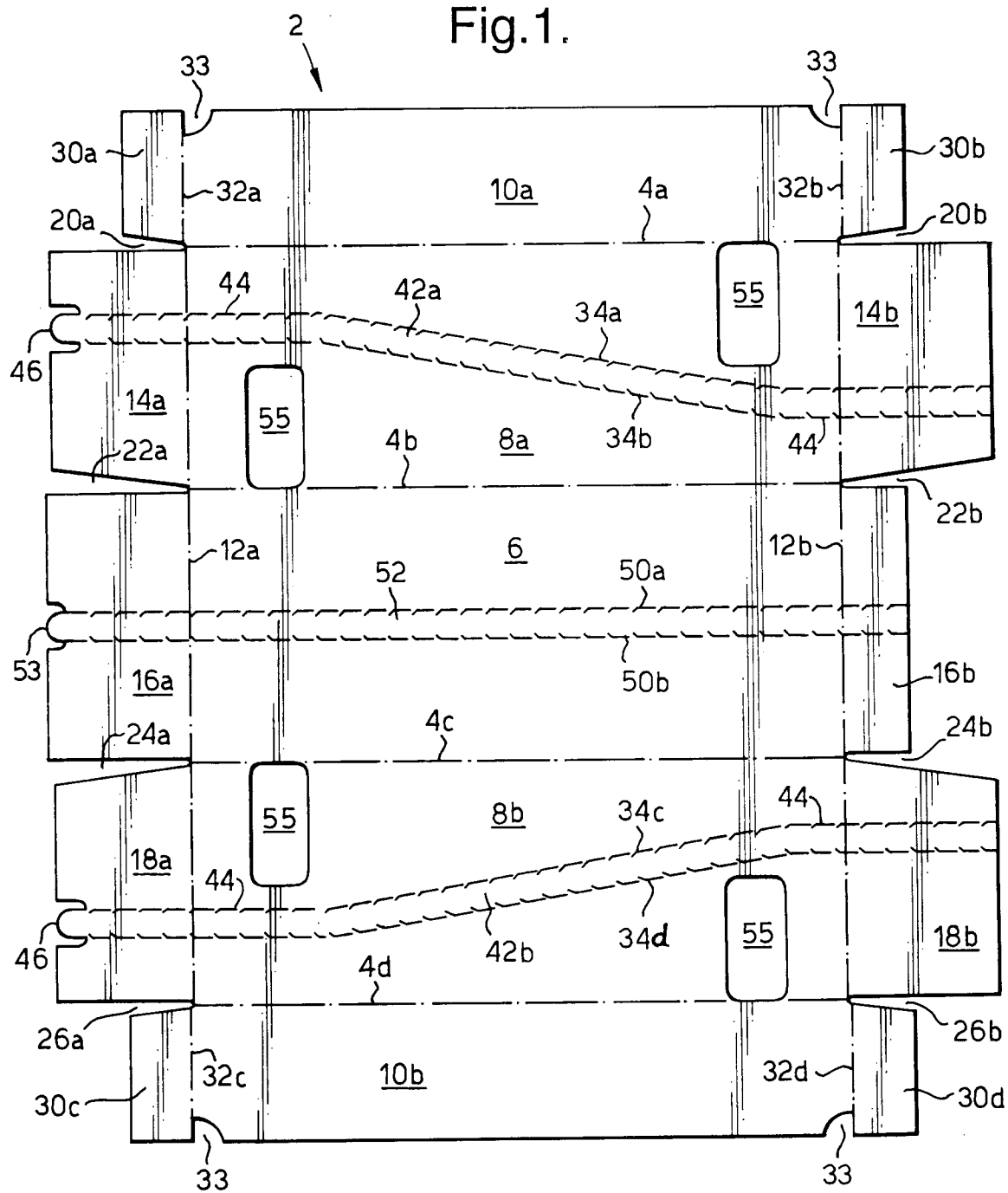


Fig.2.

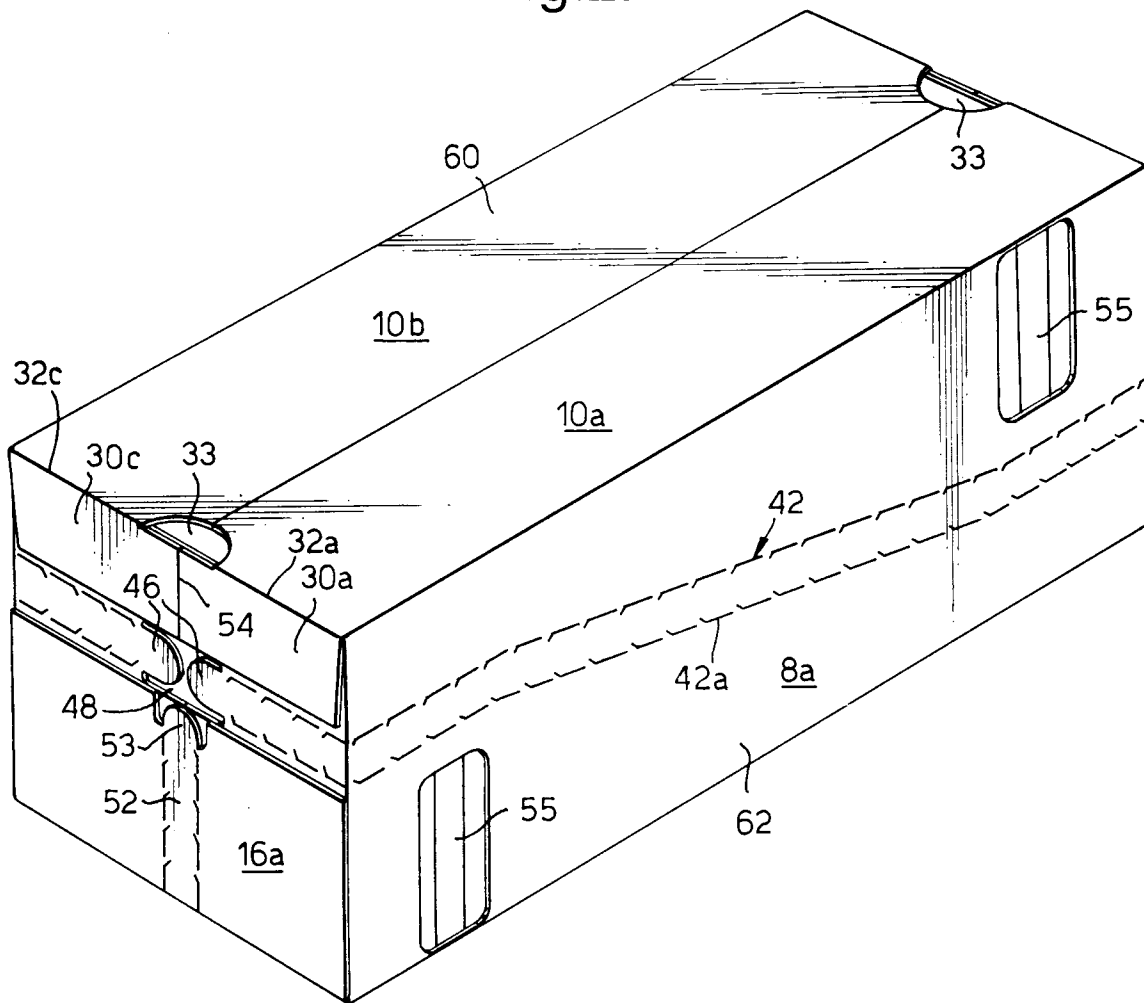


Fig.3.

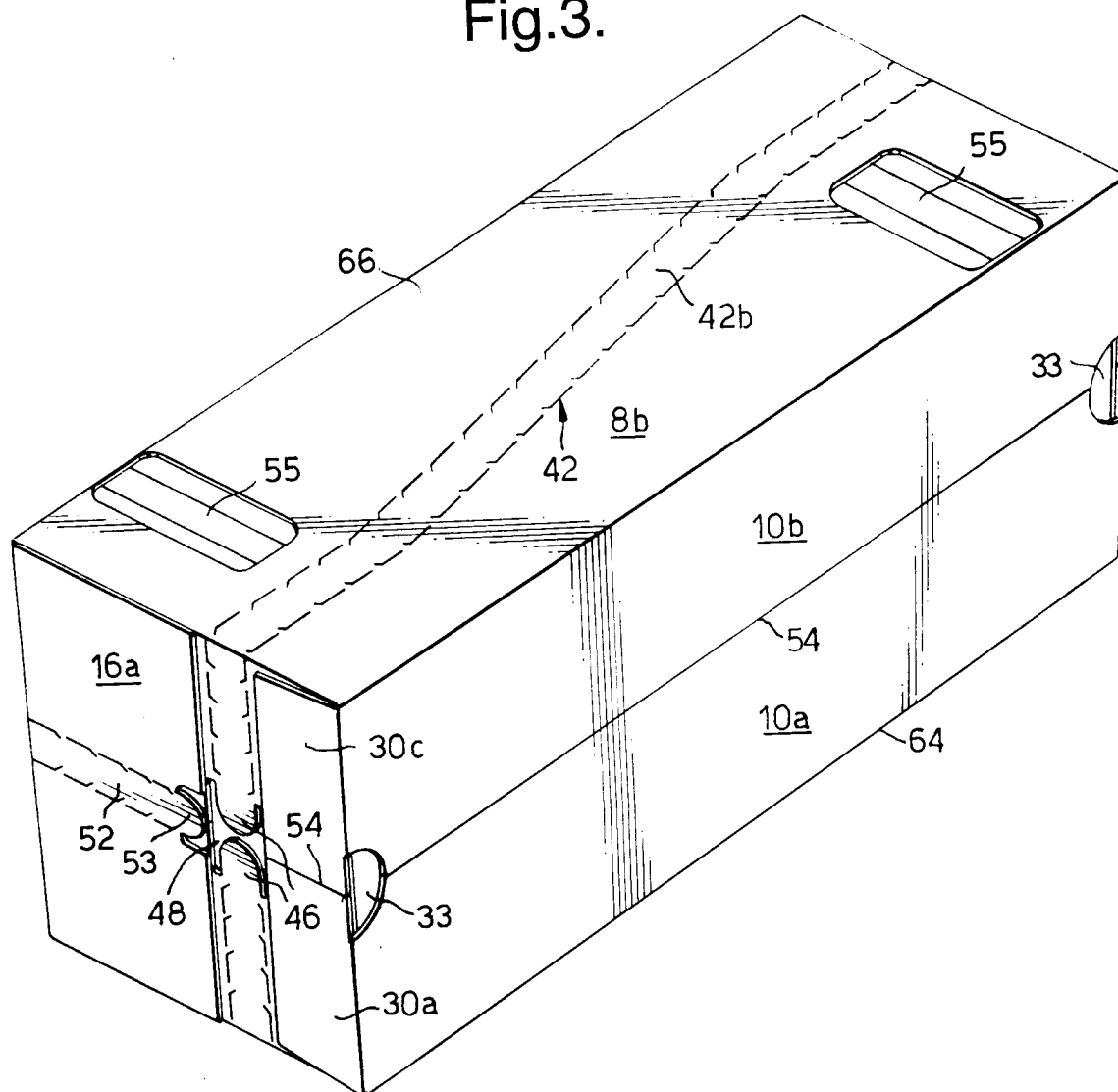


Fig.4.

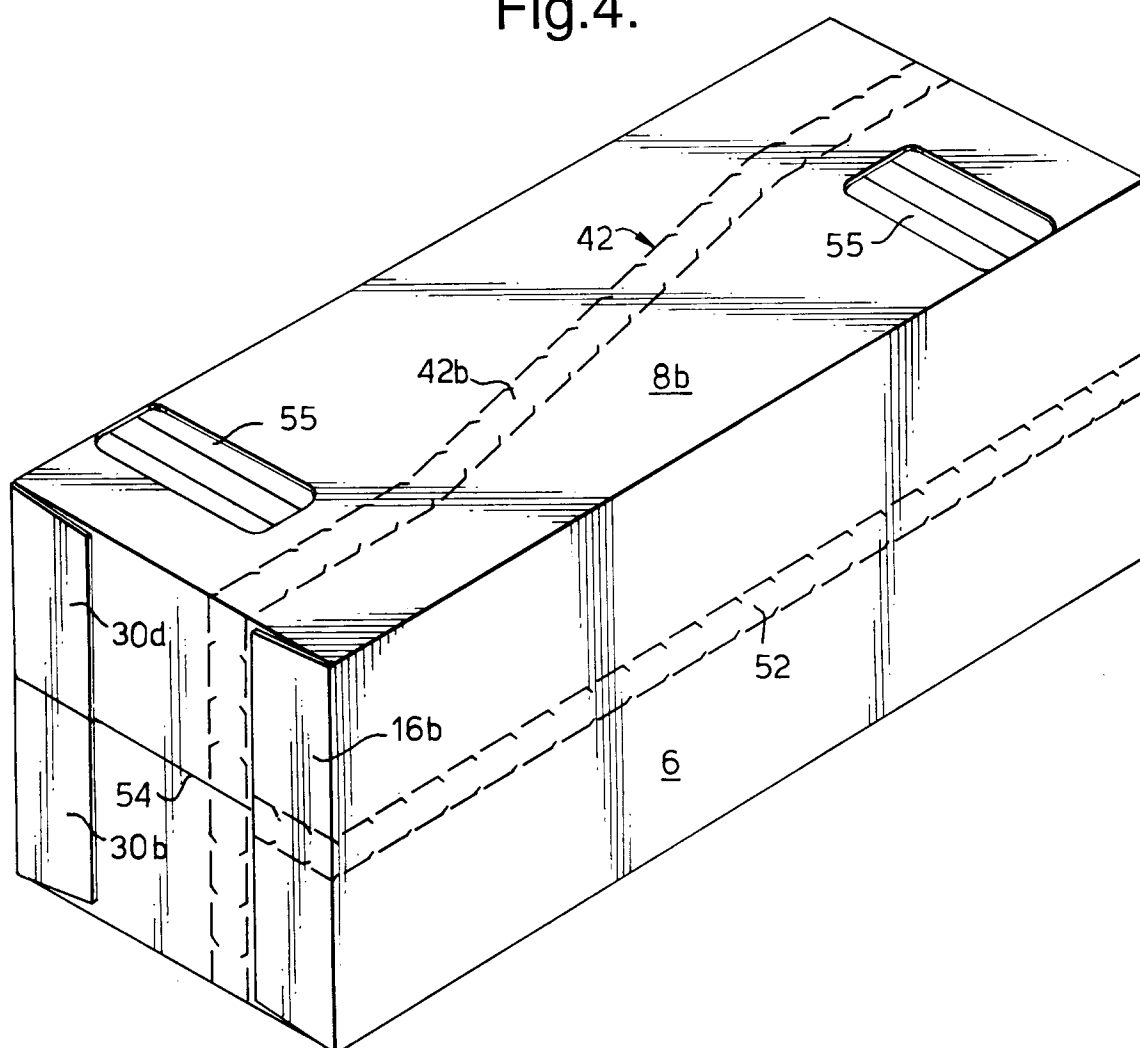


Fig.5.

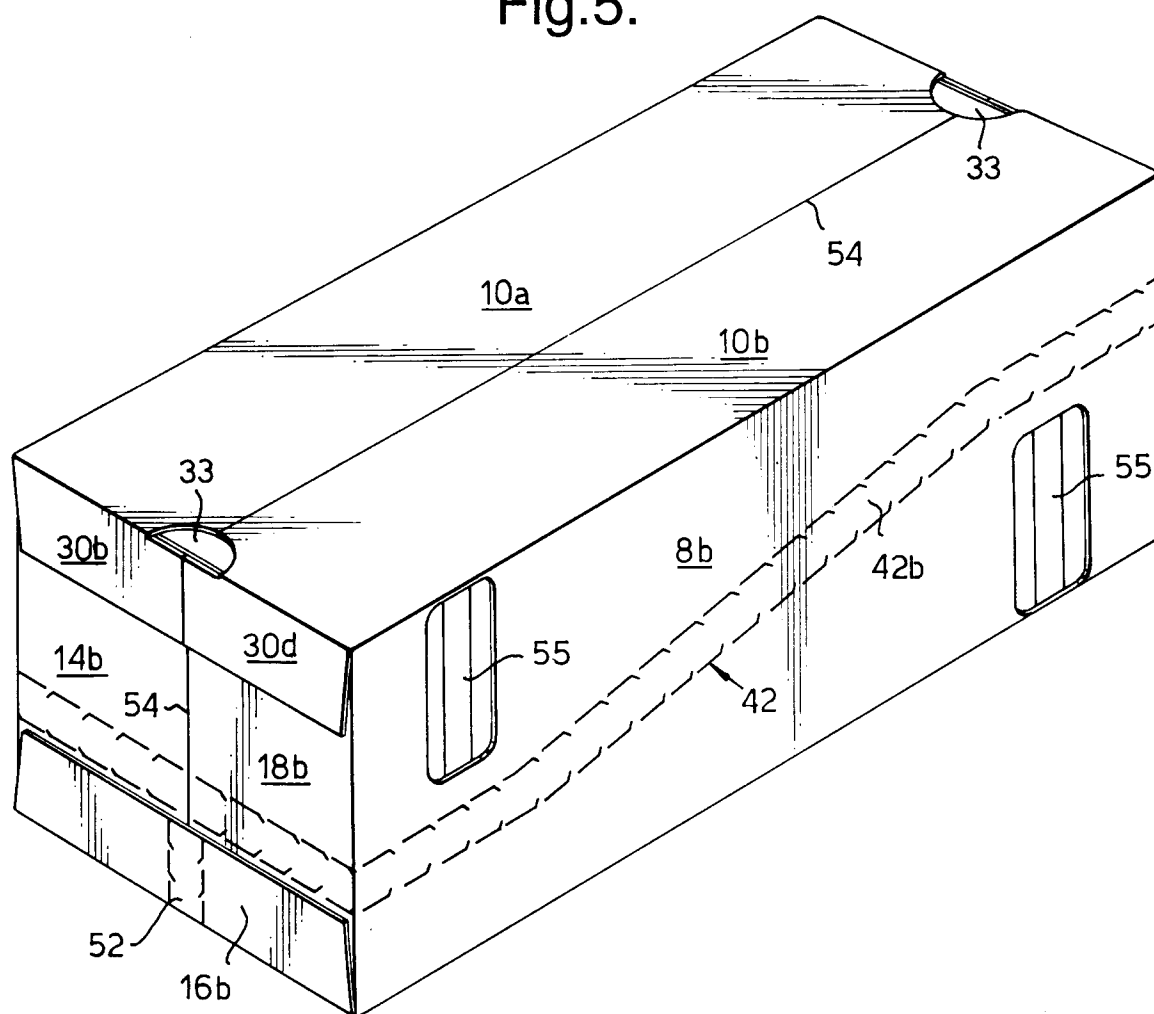


Fig.6.

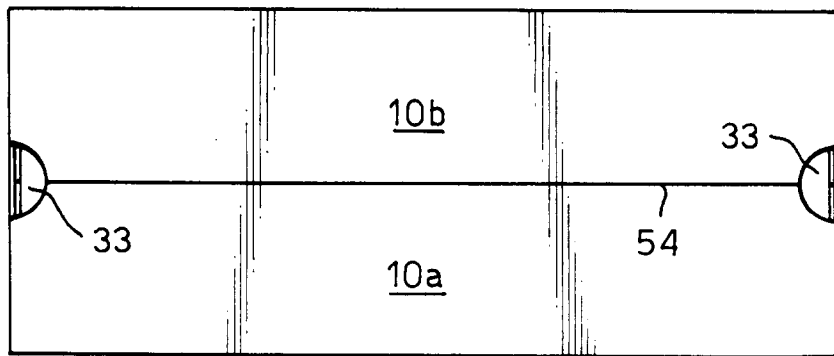


Fig.7.

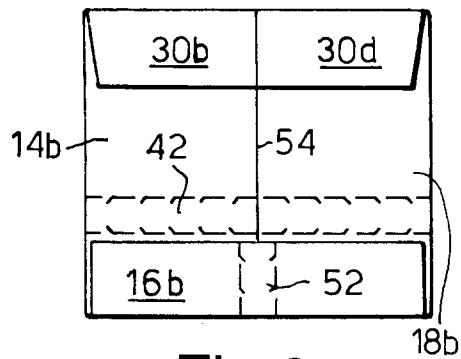


Fig.9.

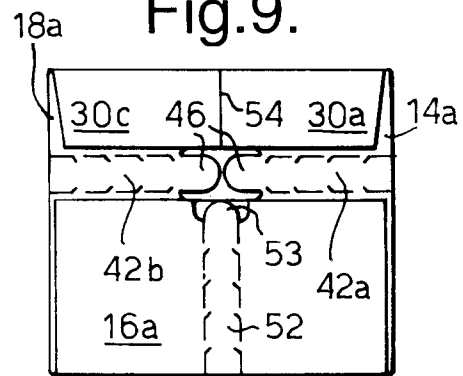


Fig.8.

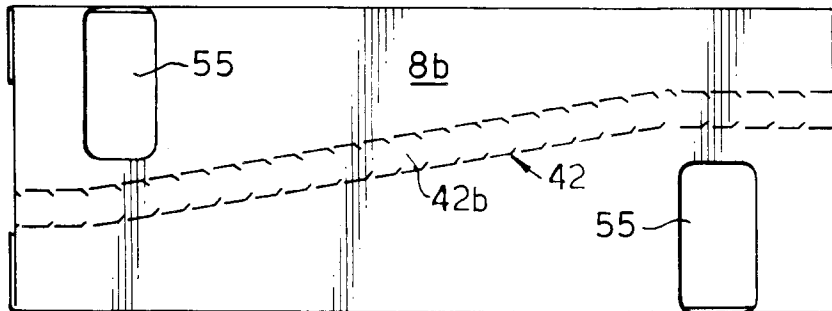


Fig.10.

